SEQUENCE LISTING

<110> Weiss, Stefan

Little, Melvyn

Knackmuss, Stefan

Rey, Clémence

Büttner, Claudia

Röttgen, Peter

Reusch, Uwe

<120> Single-chain antibodies against the 37 kDa/67 kDa laminin receptor as tools for the diagnosis and therapy of prion diseases, production and use

<130> 14620/CH/ajk

<140> PCT/EP2004/011268

<141> 2004-10-08

<160> 4

<170> PatentIn version 3.1

<210> 1

<211> 816

<212> DNA

<213> artificial sequence

<220>

<223> DNA codes for single-chain antibody scFv S18. It is contained in the plasmid pEX/HAM/LRP-S18. This plasmid was deposited in the DSMZ, Mascheroder Weg 1b, D-38124 under the accession number xxxx. After transformation of the plasmid in E.coli XL1-Blue, the production of the scFv antibody S18 is possible.

<400> 1

caggtgcagc tgcaggagtc tgggggaggc ttggtacagc ctgggggtc cctgagactc 60

tcctgtgcag cctctggatt catgtttagc aggtatgcca tgagctgggt ccgccaggct 120

ccagggaagg ggccagagtg ggtctcaggt attagtggta gtggtggtag tacatactac 180

gcagactccg tgaagggccg gttcaccgtc tccagagaca attccaagaa cacgctgtat 240

ctgcaaatga acagcctgag agccgaggac acggccgtat attactgtgc gagacatccg 300

ggtttttggc attttgacta ctggggccag ggaactctgg tcaccgtctc ctcagggagt 360

gcatccgccc caaagcttga agaaggtgaa ttttcagaag cacgcgtatc tgaactgact 420

caggaccctg ctgtgtctgt ggccttggga cagacagtca ggatcacatg ccaaggagac 480

agcctcagaa acttttatgc aagctggtac cagcagaagc caggacaggc ccctactctt 540

gtcatctatg gtttaagtaa aaggccctca gggatcccag accgattctc tgcctccagc 600

tcaggaaaca cagcttcctt gaccatcact ggggctcagg cggaagatga ggctgactat 660

tactgtaact cccgggacag aagtggtaat catgtaaatg tgctattcgg cggagggacc 720

aagctgaccg tcctacgtca gcccaaggct gccccctcgg tcactctgtt cccgccctct 780

tctgcggccg ctggatccca tcaccatcac catcac
816

<210> 2

<211> 272

<212> PRT

<213> artificial sequence

<220>

<223> This protein corresponds to the single-chain antibody S18. It can
be synthesized in E.coli XL1-Blue after transformation of the plasmid pEX/HAM/LRP-S18

<400> 2

Gln Val Gln Leu Gln Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10
15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Met Phe Ser Arg Tyr
20 25 30

Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Pro Glu Trp Val
35 40 45

Ser Gly Ile Ser Gly Ser Gly Gly Ser Thr Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Val Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg His Pro Gly Phe Trp His Phe Asp Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser Gly Ser Ala Ser Ala Pro Lys Leu Glu Glu
115 120 125

Gly Glu Phe Ser Glu Ala Arg Val Ser Glu Leu Thr Gln Asp Pro Ala
130 135 140

Val Ser Val Ala Leu Gly Gln Thr Val Arg Ile Thr Cys Gln Gly Asp
145 150 155 160

Ser Leu Arg Asn Phe Tyr Ala Ser Trp Tyr Gln Gln Lys Pro Gly Gln
165 170 175

Ala Pro Thr Leu Val Ile Tyr Gly Leu Ser Lys Arg Pro Ser Gly Ile
180 185 190

Pro Asp Arg Phe Ser Ala Ser Ser Ser Gly Asn Thr Ala Ser Leu Thr
195 200 205

Ile Thr Gly Ala Gln Ala Glu Asp Glu Ala Asp Tyr Tyr Cys Asn Ser
210 215 220

Arg Asp Arg Ser Gly Asn His Val Asn Val Leu Phe Gly Gly Gly Thr
225 230 235 240

Lys Leu Thr Val Leu Arg Gln Pro Lys Ala Ala Pro Ser Val Thr Leu
245 250

255

Phe Pro Pro Ser Ser Ala Ala Ala Gly Ser His His His His
His His
260 265 270

<210> 3

<211> 834

<212> DNA

<213> artificial sequence

<220>

<223> DNA codes for single-chain antibody scFv N3. The DNA is contained
in the plasmid pEX/HAM/LRP-N3. This plasmid was deposited in the
DSMZ, Mascheroder Weg 1b, D-38124 under the accession number xxxx.
After transformation of the plasmid in E.coli XL1-Blue, the production of the scFv antibody N3 is possible.

<400> 3
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tcctgtgcag cgtctggatt caccttcagt agctatggca tgcactgggt ccgccaggct 120

ccaggcaagg ggctggagtg ggtggcagtt atatggtatg atggaagtaa taaatactat 180

gcagactccg tgaagggccg attcaccatc tccagagaca attccaagaa cacgctgtat 240

ctgcaaatga acagcctgag agccgaggac acggctgtgt attactgtgc gactataccg 300

cgctcgtctt tctactacgg tatggacgtc tggggccaag ggaccacggt caccgtctcc 360

tcagggagtg catccgcccc aaccccttaag cttgaagaag gtgaattttc agaagcacgc 420

gtacagcctg tgctgactca gccaccctca gcgtctggga ccccagggca gagggtcacc 480

atctcttgtt ctggaagcag atccaacatc ggaagtaata ctgtaaactg gtaccagcag 540

ctcccaggaa cggcccccaa actcctcatc tatggtaata atcagcggcc ctcaggggtc 600

cctgagcgat tctctggctc caagtctggc acctcagcct ccctggccat cagtgggctc 660

cagtcagagg atgaggctga ttattactgt gcagcgtggg atgacagcct gactggtgtg 720

cttttcggcg gagggaccaa gctgaccgtc ctaggtcagc ccaaggctgc cccctcggtc 780

actctgttcc cgccctcttc tgcggccgct ggatcccatc accatcacca tcac 834

<210> 4

<211> 278

<212> PRT

<213> artificial sequence

<220>

<223> This protein corresponds to the single-chain antibody N3. It can be synthesized in E.coli XL1-Blue after transformation of the plasmid pEX/HAM/LRP-N3.

<400> 4

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg
1 5 10 15

Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr
20 25 30

Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Ala Val Ile Trp Tyr Asp Gly Ser Asn Lys Tyr Tyr Ala Asp Ser Val
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr
65 70 75 80

Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Thr Ile Pro Arg Ser Ser Phe Tyr Tyr Gly Met Asp Val Trp Gly
100 105 110

Gln Gly Thr Thr Val Thr Val Ser Ser Gly Ser Ala Ser Ala Pro Thr
115 120 125

Leu Lys Leu Glu Glu Gly Glu Phe Ser Glu Ala Arg Val Gln Pro Val
130 135 140

Leu Thr Gln Pro Pro Ser Ala Ser Gly Thr Pro Gly Gln Arg Val Thr
145 150 155 160

Ile Ser Cys Ser Gly Ser Arg Ser Asn Ile Gly Ser Asn Thr Val Asn
165 170 175

Trp Tyr Gln Gln Leu Pro Gly Thr Ala Pro Lys Leu Leu Ile Tyr Gly
180 185 190

Asn Asn Gln Arg Pro Ser Gly Val Pro Glu Arg Phe Ser Gly Ser Lys
195 200 205

Ser Gly Thr Ser Ala Ser Leu Ala Ile Ser Gly Leu Gln Ser Glu Asp
210 215 220

Glu Ala Asp Tyr Tyr Cys Ala Ala Trp Asp Asp Ser Leu Thr Gly Val
225 230 235 240

Leu Phe Gly Gly Gly Thr Lys Leu Thr Val Leu Gly Gln Pro Lys Ala
245 250 255

Ala Pro Ser Val Thr Leu Phe Pro Pro Ser Ser Ala Ala Ala Gly Ser
260 265 270

His His His His His His
275